Salesforce: MFS-S2S Extension

Introduction:

Data migration in Salesforce is certainly a sensitive thing and it can be achieved in various ways using various Data Migration tools. There is another mode of data transfer between two organizations is by S2S. This is a feature which is present within salesforce.com. It has some advantages as well as some disadvantages.

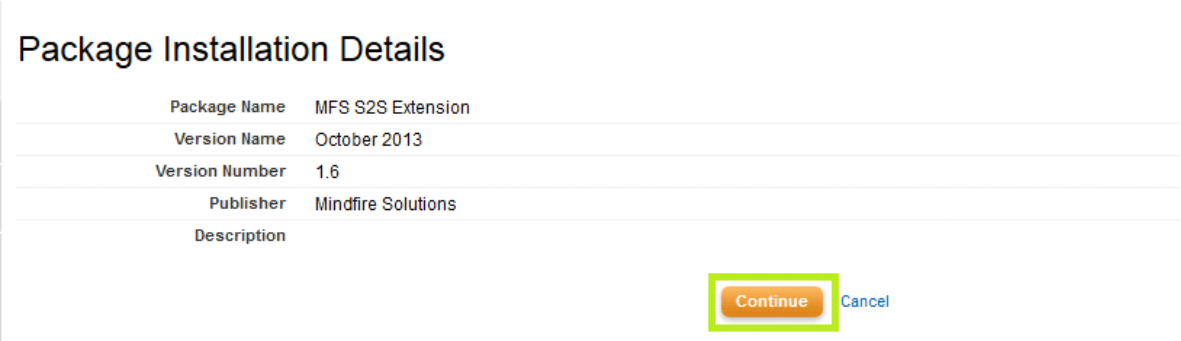
S2S Extension-Installation and Configuration

Installation:

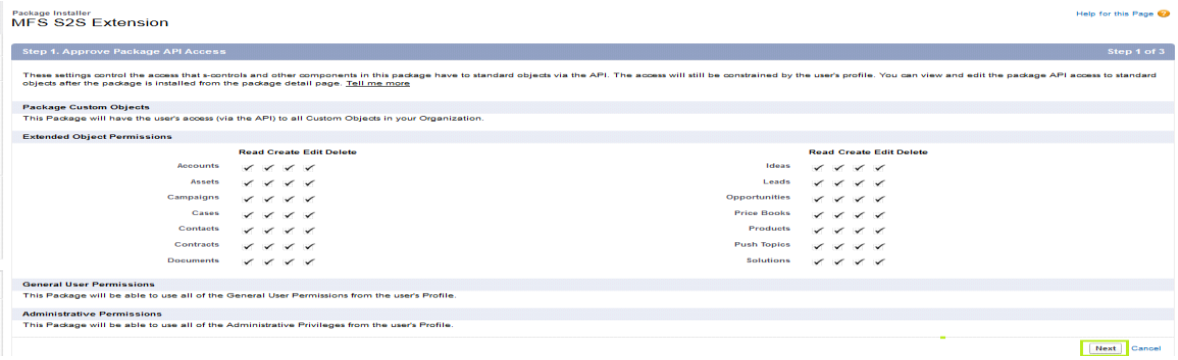
I) Click get it now from the application information page.

II) Read the user terms, and select the checkbox. Enter your Salesforce Organizations username and password, and then Login in your organization.

III) Review the package items and click Continue.



IV) The next step is about Approve Package API Access Step 1. After reviewing all the steps click next.


Package Installer
MFS S2S Extension
Help for this Page
Step 1. Approve Package API Access
Step 1 of 3
These settings control the access that s-controls and other components in this package have to standard objects via the API. The access will still be constrained by the user's profile. You can view and edit the package API access to standard objects after the package is installed from the package detail page. Tell me more
Package Custom Objects
This Package will have the user's access (via the API) to all Custom Objects in your Organization.
Extended Object Permissions
Read Create Edit Delete
Accounts
Assets
Campaigns
Cases
Contacts
Contracts
Documents
Ideas
Leads
Opportunities
Price Books
Products
Push Topics
Solutions
General User Permissions
This Package will be able to use all of the General User Permissions from the user's Profile.
Administrative Permissions
This Package will be able to use all of the Administrative Privileges from the user's Profile.
Next
Cancel

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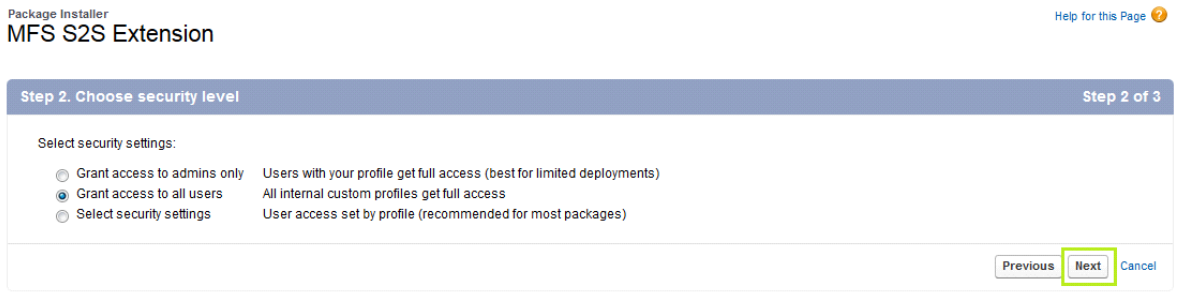
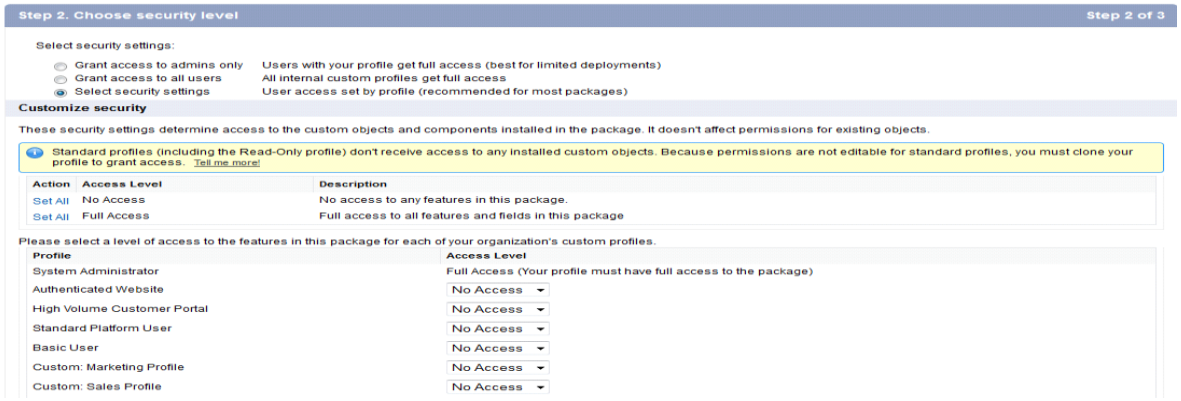
V) In Enterprise, Unlimited, Performance, and Developer Editions, choose a security option, and click next.


Package Installer
MFS S2S Extension
Help for this Page
Step 2. Choose security level
Step 2 of 3
Select security settings:
Grant access to admins only
Users with your profile get full access (best for limited deployments)
Grant access to all users
All internal custom profiles get full access
Select security settings
User access set by profile (recommended for most packages)
Previous
Next
Cancel

VI) In Enterprise, Unlimited, Performance, and Developer Editions, if you chose Select security settings, select the level of access to give users in each profile and click next


Step 2. Choose security level
Step 2 of 3
Select security settings:
Grant access to admins only
Users with your profile get full access (best for limited deployments)
Grant access to all users
All internal custom profiles get full access
Select security settings
User access set by profile (recommended for most packages)
Customize security
These security settings determine access to the custom objects and components installed in the package. It doesn't affect permissions for existing objects.
Standard profiles (including the Read-Only profile) don't receive access to any installed custom objects. Because permissions are not editable for standard profiles, you must clone your profile to grant access. Tell me more!
Action
Access Level
Description
Set All
No Access
No access to any features in this package.
Set All
Full Access
Full access to all features and fields in this package
Please select a level of access to the features in this package for each of your organization's custom profiles.
Profile
Access Level
System Administrator
Full Access (Your profile must have full access to the package)
Authenticated Website
No Access
High Volume Customer Portal
No Access
Standard Platform User
No Access
Basic User
No Access
Custom: Marketing Profile
No Access
Custom: Sales Profile
No Access

VII) Then you have to Click Install.

VIII) Then the package will be installed in your organization.

The package contains both source organization and target organization functionalities. Users have to install the package both in source organization and target organization and then use it for their respective functionalities.

After installation an app will be installed in user's organization which will be displayed in the top right app section.

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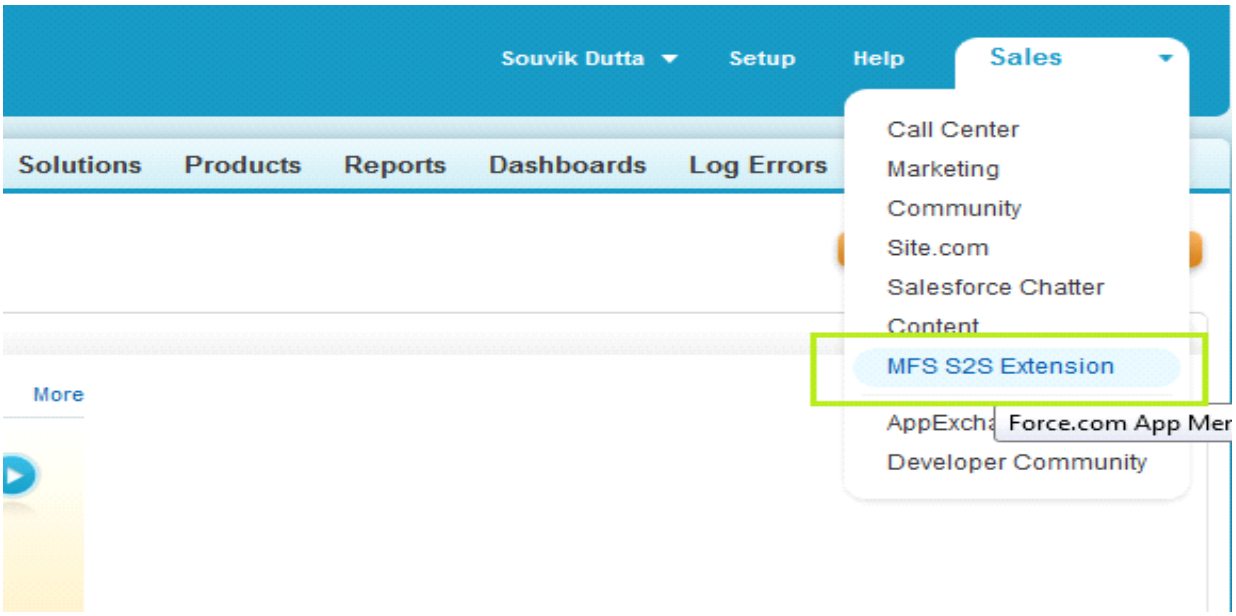
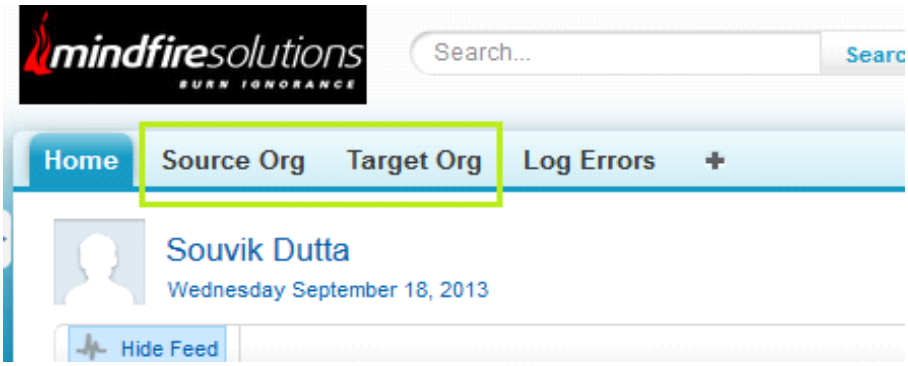


While clicking on the MFS S2S Extension app, users will find two tabs:
Source Org and Target Org



If the organization in which user installed the app is the source organization I.e. from which data needs to transfer then users will get the Data Migration functionality in the **Source Org** Tab.

If the organization in which user installed the app is the target organization I.e. to which data is transferred then users will get the Dynamic LookUp Assignment functionalities in the **Target Org** Tab.

After installation users can find that the above mentioned field creation step is already done for Account and Contact object (Sample) for user convenience. Users can find that in Account and Contact object, fields are created for both source and target organization as we can use this app in both source and target organization. But for other objects users need to create the Source org fields in source org and target org fields in target org.

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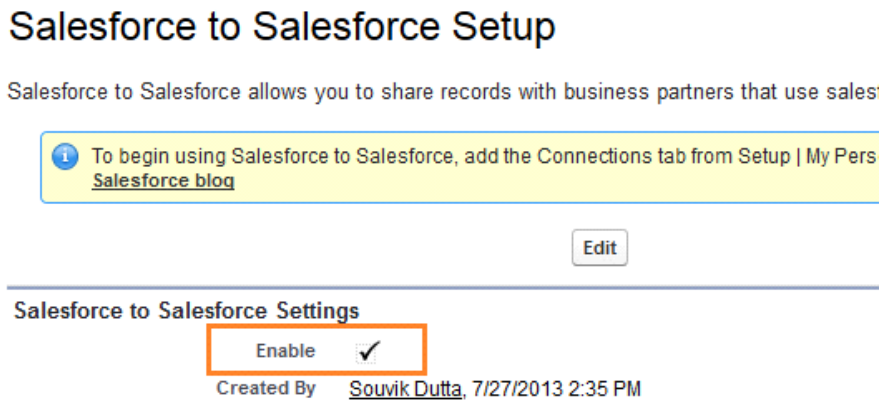
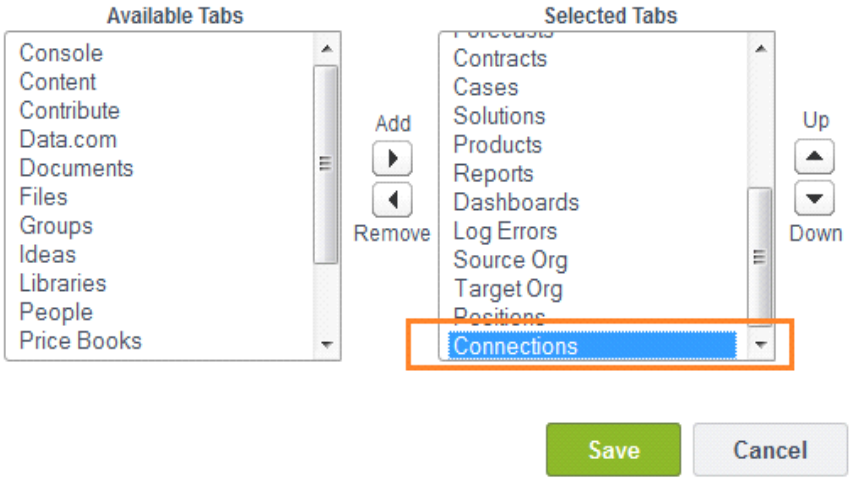
Configuration:

I) First of all we need to enable Salesforce to Salesforce connection in both the source and target organizations by going to Customize > Salesforce to Salesforce > Settings


Salesforce to Salesforce Setup
Salesforce to Salesforce allows you to share records with business partners that use sales
To begin using Salesforce to Salesforce, add the Connections tab from Setup | My Pers
Salesforce blog
Edit
Salesforce to Salesforce Settings
Enable
Created By
Souvik Dutta, 7/27/2013 2:35 PM

II) Then we need to enable the Connections tab and click Save.



III) In the connections tab we need to create a new connection by selecting a contact from the lookup in the source organization and send a new invitation.

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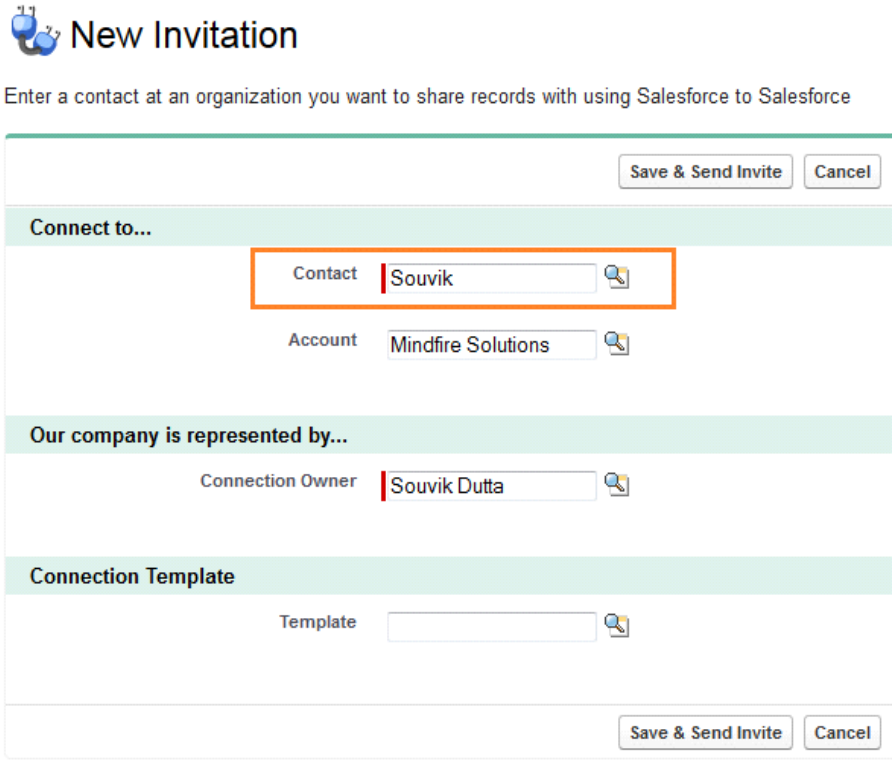
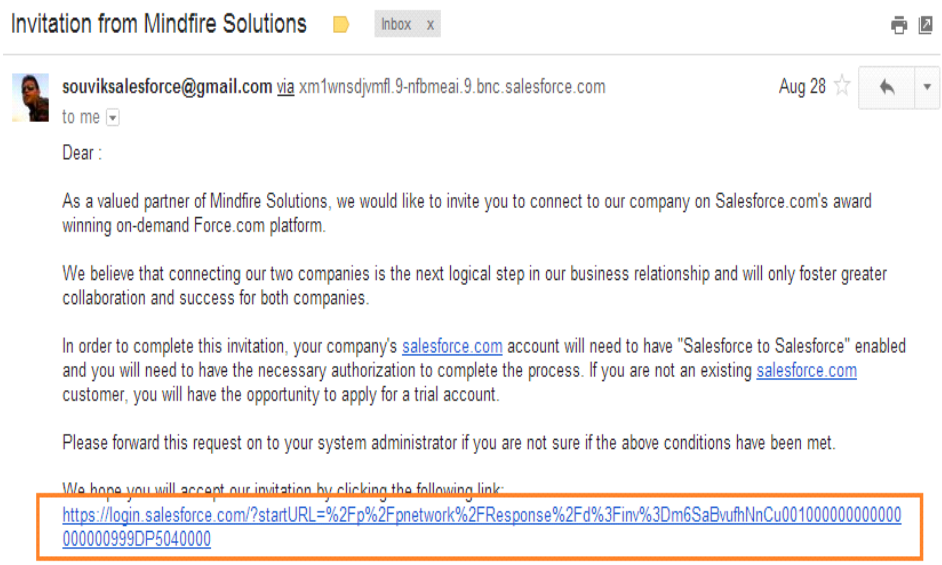


IV) After that a link will be sent to the contact's email address by clicking which, we open the target organization and create the connection between the source and target by accepting that.


Invitation from Mindfire Solutions
Inbox x
souviksalesforce@gmail.com via xm1wnsdjvmfl.9-nfbmeai.9.bnc.salesforce.com
Aug 28
to me
Dear :
As a valued partner of Mindfire Solutions, we would like to invite you to connect to our company on Salesforce.com's award winning on-demand Force.com platform.
We believe that connecting our two companies is the next logical step in our business relationship and will only foster greater collaboration and success for both companies.
In order to complete this invitation, your company's salesforce.com account will need to have "Salesforce to Salesforce" enabled and you will need to have the necessary authorization to complete the process. If you are not an existing salesforce.com customer, you will have the opportunity to apply for a trial account.
Please forward this request on to your system administrator if you are not sure if the above conditions have been met.
We hope you will accept our invitation by clicking the following link:
https://login.salesforce.com/?startURL=%2Fp%2Fpnetwork%2FResponse%2Fd%3Finv%3Dm6SaBvufhNnCu001000000000000000000999DP5040000

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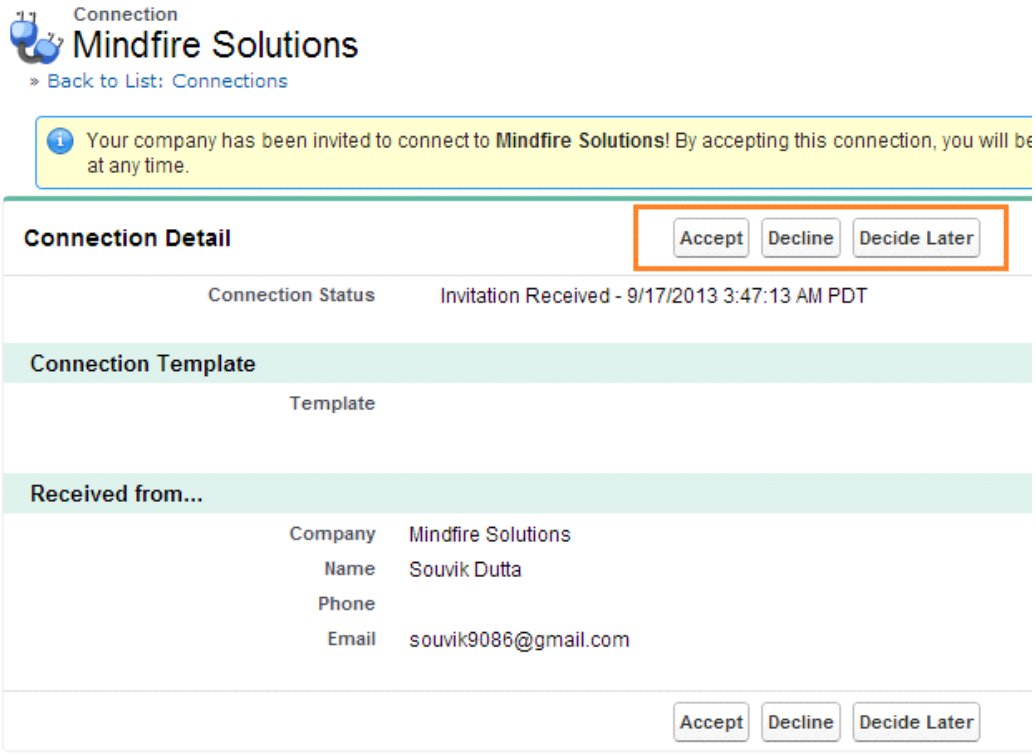
After clicking the link we have to accept the connection in the Target organization.



V) Now that all the connections are ready we can start sharing the objects and fields which we need to transfer through Publish/Unpublished Section.

VI) First we need to publish the objects in the source organization by checking them in the list.

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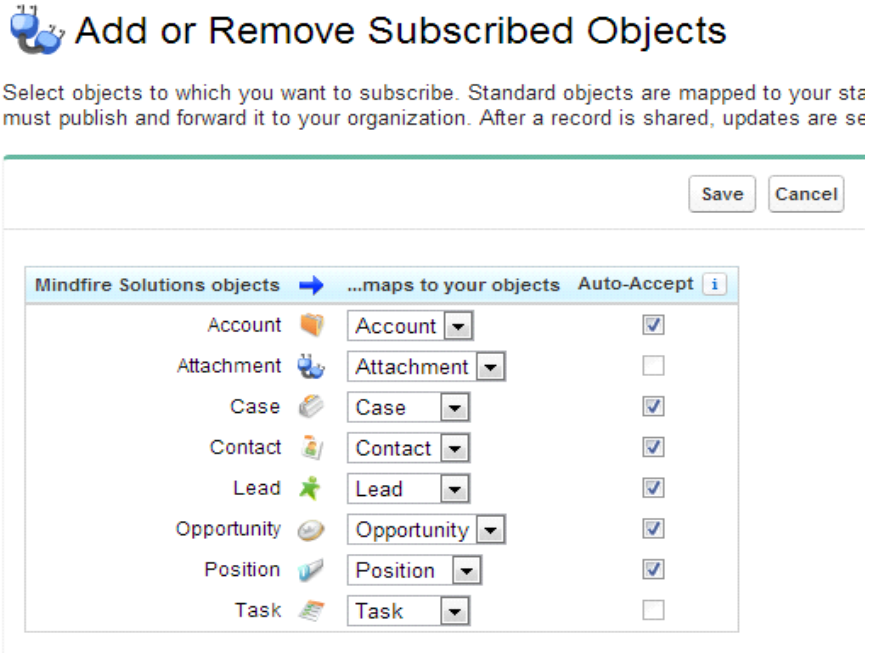
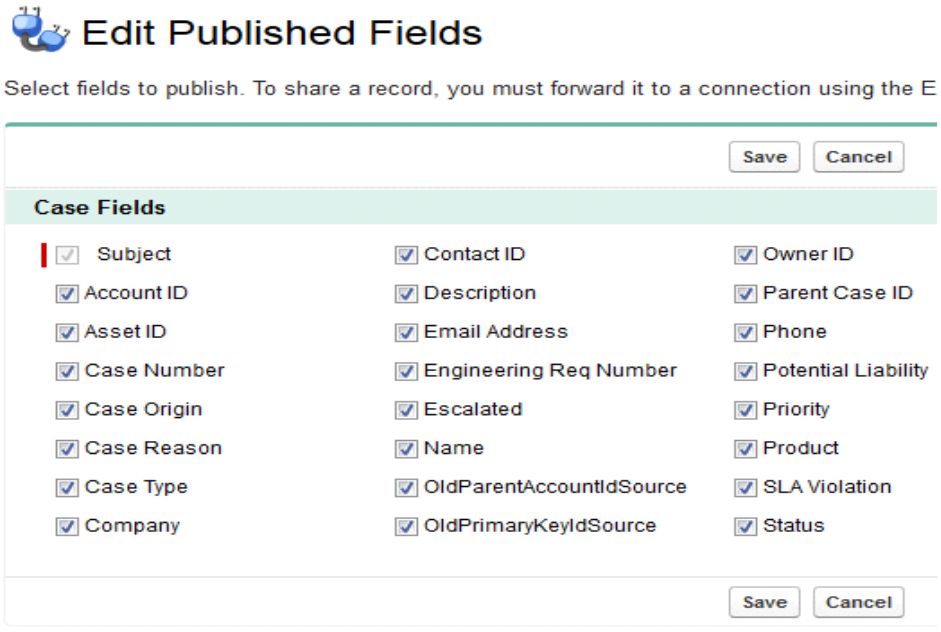
VII) In the target organization we need to go the Subscribe/Unsubscribe section and need to accept the objects which are shared by the source organization and we can check the auto-accept checkbox which implies that data will be auto-accepted after those will be shared by the source organization.



VIII) Then in the source organization we need to check the fields of the objects which we want to share so that those can be visible in the target.



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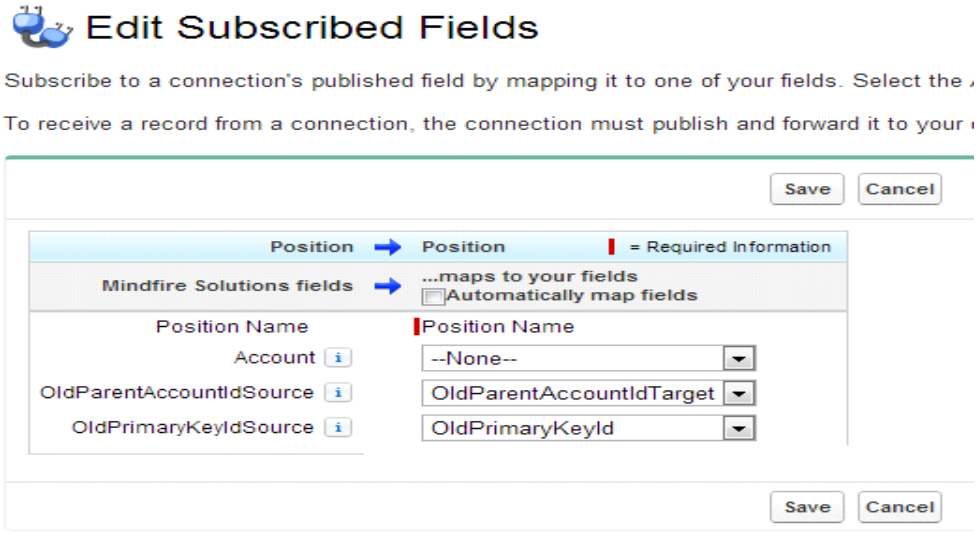
IX) Then we can map the fields shared by source organization with those in the target organization.



Features of S2S Extension Steps of Guidance:

Data Transfer with Lookups:

We can transfer data between two organizations in two modes:

Manually - We can see a button in the list view of all published objects "Forward to Connections". We can click this button by checking the data we need to transfer from the list and then select the connection names to which the data needs to be transferred. We can observe that there are checkboxes present below regarding transfer of the related data. If we select those the related lookup object data will be transferred as well. In this way we can transfer related data as well.

For example when transferring accounts, there will be a checkbox below mentioning "Send Related Contacts". By checking that the related contacts will also be transferred along with the accounts.

#Note: Manual S2S data transfer is good when the data amount is few.

Dynamically – This is handled by this app.

S2S APP User Manual:

When the data amount is large then manual transfer is not the best option. We have to do that through Apex Script. Here comes the beginning of our APP to transfer huge amount of records from one Salesforce organization to another through our custom page where you can get all the

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Standard functionalities like “Select Connections” to which you need to transfer data. “Select Child Objects” whose data you need to transfer along with the parent object.

Source Organization Pre-requisites S2S extension:

First the Field Creation Step: Here users need to create formula (text) fields to keep the source parent and primary key values and transfer them to target organization which will help them to assign correct lookups in the target organization in each object he needs to transfer.

For example, we are showing how to create fields for one object. In this way users have to create fields for each object they need to transfer.
For Contact, fields need to be created for standard lookup fields
1) OldPrimaryKeyIdSource__c
2) OldParentAccountIdSource__c
3) OldParentContactReportsToIdSource__c

Edit | Del	OldParentAccountIdSource	OldParentAccountIdSource__c	Formula (Text)	Souvik Dutta, 8/26/2013 6:37 PM
Edit | Del	OldParentContactReportsToIdSource	OldParentContactReportsToIdSource__c	Formula (Text)	Souvik Dutta, 8/26/2013 6:38 PM
Edit | Del	OldPrimaryKeyIdSource	OldPrimaryKeyIdSource__c	Formula (Text)	Souvik Dutta, 8/26/2013 1:03 PM

First one keeps the Record Id of the contact record in source organization.
Second and third one will store the parent Account and Self lookup Contact values of the source organization. Additionally if users will create any custom lookup field in Contact, then respective formula fields needs to be created to store that value.

#Note: The above field names mentioned is not constant. Users can give their likely names of the fields and use those during mapping.

Secondly users have to follow the above mentioned steps to create a S2S connection and things needed to be done in the source organization.

Target Organization Pre-requisites:

First the Field Creation Step: Here users have to create text fields to keep the old parent and primary key values of the source organization which will help them to assign correct lookups in the target organization for each object.

For example, we are showing how to create fields for one object. In this way users have to create for each objects they needs to transfer. For Contact, fields need to be created

1) OldPrimaryKeyIdTarget__c
2) OldParentAccountIdTarget__c
3) OldParentContactReportsToIdTarget__c

This text fields will be filled up with source organization records primary keys and parent ids after migration with the help of field mapping between the two organization connections.

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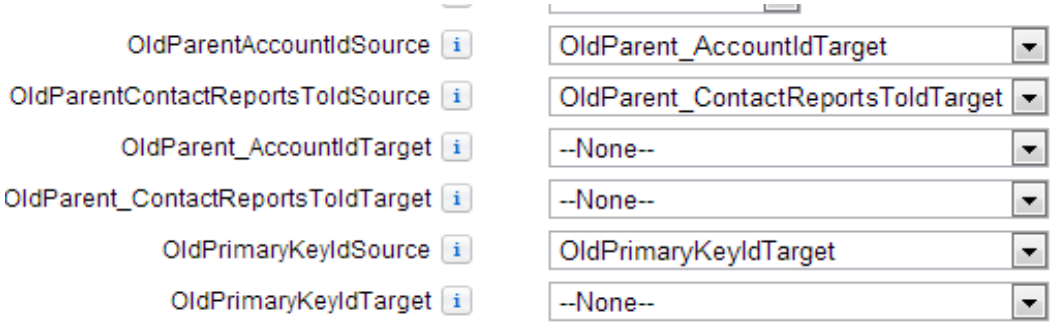
Secondly users have to follow the steps mentioned above to create a S2S connection and things needed to be done in the target organization.

For the last point in the above steps i.e. field mapping we needed to do like this.
For e.g. for Contact, field mapping for this fields created by the users in both orgs will be like this.

1) OldPrimaryKeyIdSource__c -> OldPrimaryKeyIdTarget__c
2) OldParentAccountIdSource__c -> OldParentAccountIdTarget__c
3) OldParentContactReportsToIdSource_c -> OldParentContactReportsToIdTarget__c

See the following snap



#Note: The above field names mentioned are not constant. Users can give their likely names of the fields and they have to select those fields from the drop down while assigning the lookups which will be described later.

#Note: The package contains the already created fields for Account and Contact object.

Source Organization Data Transfer:

Users can go to our custom Data Transfer Page where at first they can dynamically SELECT the Object whose data needs to be transferred. After selection of the object, Connection selection section will open from where they can select as many Connections as they want to transfer data of the selected object. Before Object Selection

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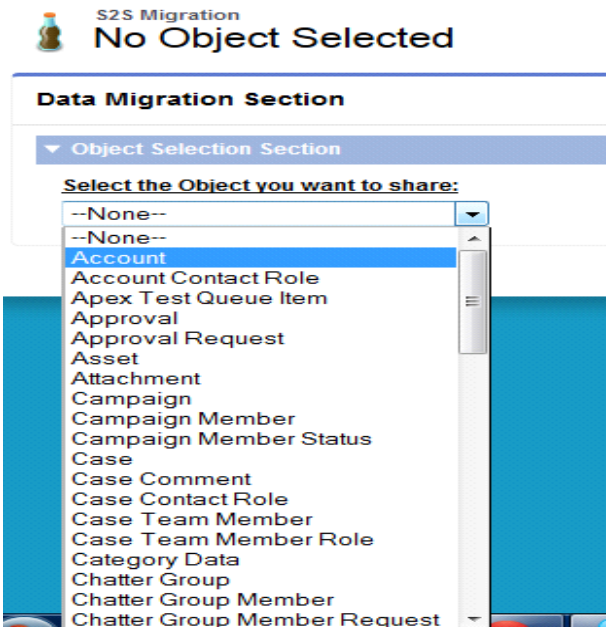
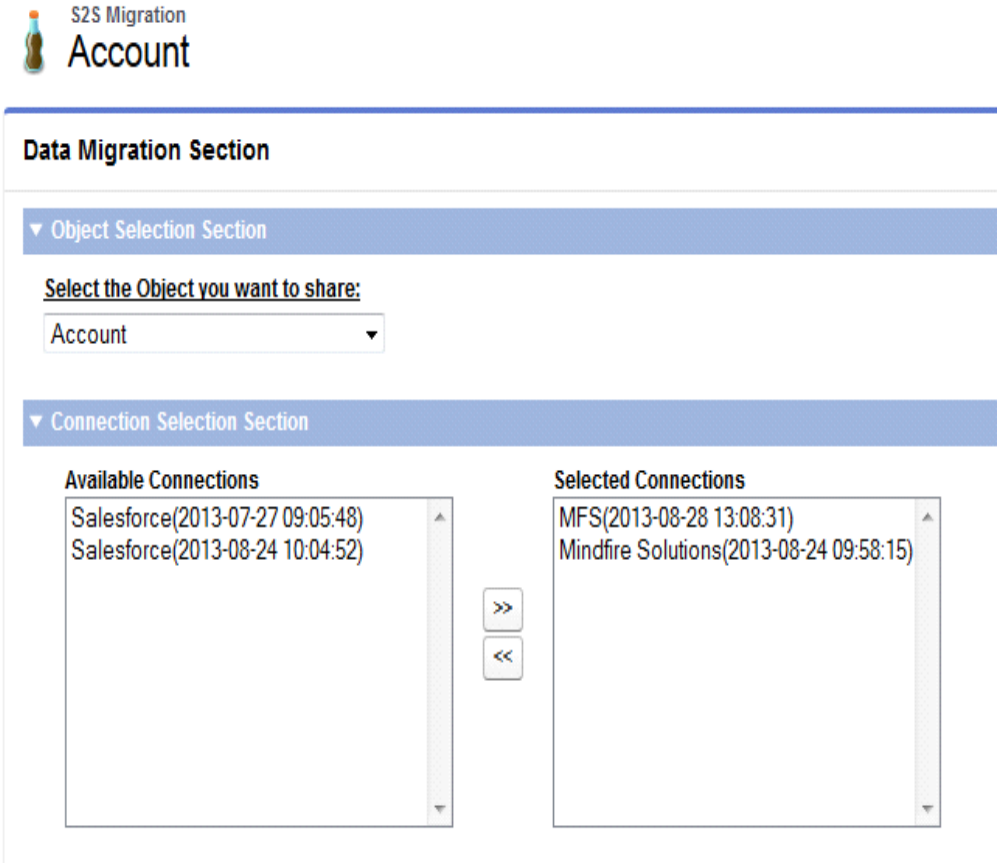


After Object Selection



Related Child Object Transfer -

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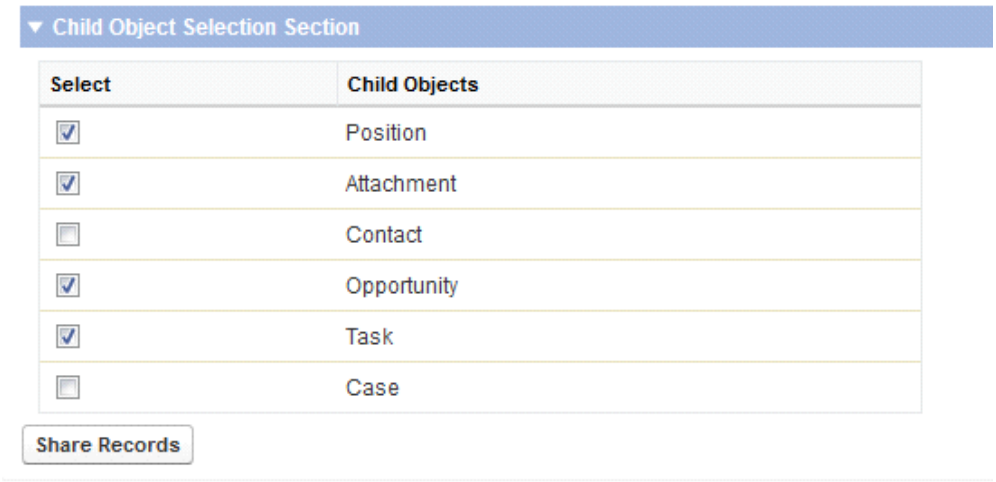
Then users can select the checkboxes for the child object data you need to transfer along with the parent selected. Remember here data transfer amount is not limited like the standard S2S functionality.



Extra Features Compared to Standard S2S transfer -
a) Data transfer amount is not limited like the standard S2S functionality.
b) Users can transfer related child custom objects along with parent objects unlike as standard transfer where users can transfer only child standard objects along with the parent. No child custom object transfer is possible through Standard S2S transfer which is all possible through this Extension app.

Target Organization Lookup Assignment:

As we can see above that we can transfer child object data along with the parent objects. So then why this Dynamic Lookup Assignment?

This is because when there is more than two level deep relationships then we cannot transfer those data through the child transfer and also we cannot assign self-lookups with that. For e.g

Account -> Contact -> Case

Consider a situation where we sent Account records with its related Contact records.
Now if we need to send some child records of Contact as well, then it will not be transferred. So where there are more than two level deep relationships then it is advisable not to transfer Contact along with Account. Instead send Account and Contact individually and then assign lookups in the target organization.

So the custom lookup assignment is very much necessary for that scenario.
Also in addition to that suppose some users do not want to use the S2S Migration i.e the Source Org functionalities and they want to transfer data through some Migration Tools for e.g Data Loader. Then this **Dynamic Lookup Assignment** feature will come into picture as through DataLoader or in any other Migration Tool, LookUp can't be assigned automatically. There also

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in DataLoader field Map we have to keep the old org record ID and Parent keys and then map them during Data Loader data transfer.

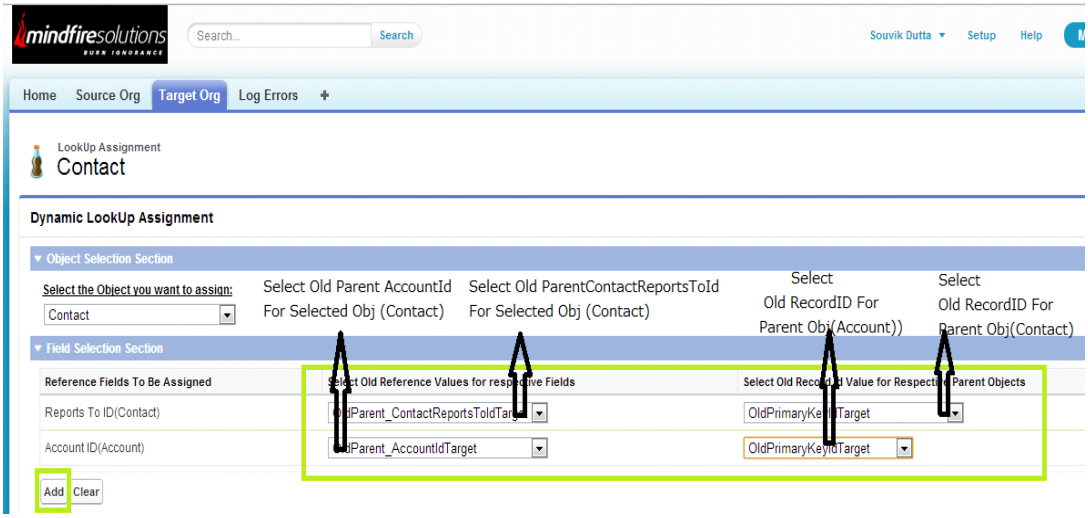
Dynamic Lookup Assignment:

Now that we transferred the object records and in the target organization we captured the old primary key and old parent key values in the text fields by mapping the fields, we have to assign the correct lookup values based on these old values.

In our app we can get it done most efficiently just by selecting the object names for which users want to assign lookups.

Users just have to follow the following steps:
a) First select the object from the drop down for which they want to assign lookups.
b) Then the Field Selection Section will open where you have to select old lookup values for each reference fields you want to assign. There will be two columns “Reference Fields” and “Select Old Reference Values” e.g. for Contact,

Reference Fields	Select Old Reference Values	Select Old RecordId Value
ReportsToId (**Contact**)	Here select the field where the source org ReportsToId Parent key value present.	Here select the field RecordID of the parent object is kept. (In this case **Contact**).
AccountId (**Account**)	Here select the field where the source org AccountId Parent key value present.	Here select the field where the source org RecordID of the parent object is kept. (In this object is kept. (In this case **Account**).



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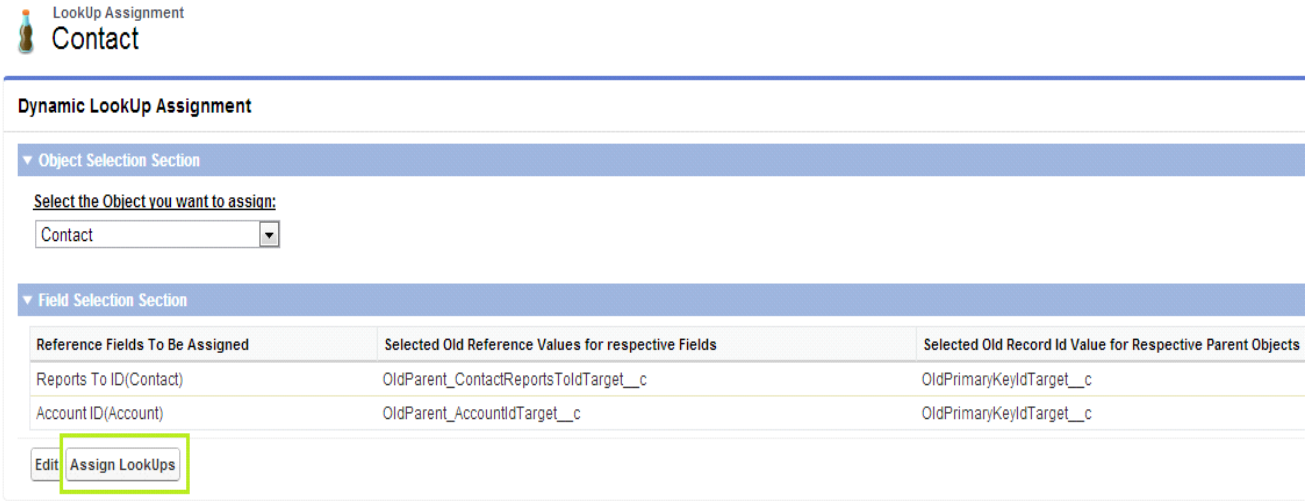
Now that we selected all the old fields corresponding to which we need to assign lookups, then we have to click the Add button. There we can check whether the selected values are correct. If user needs further modification they can click edit and change it as well. Finally they have to click the Assign Lookups button to assign the lookups.

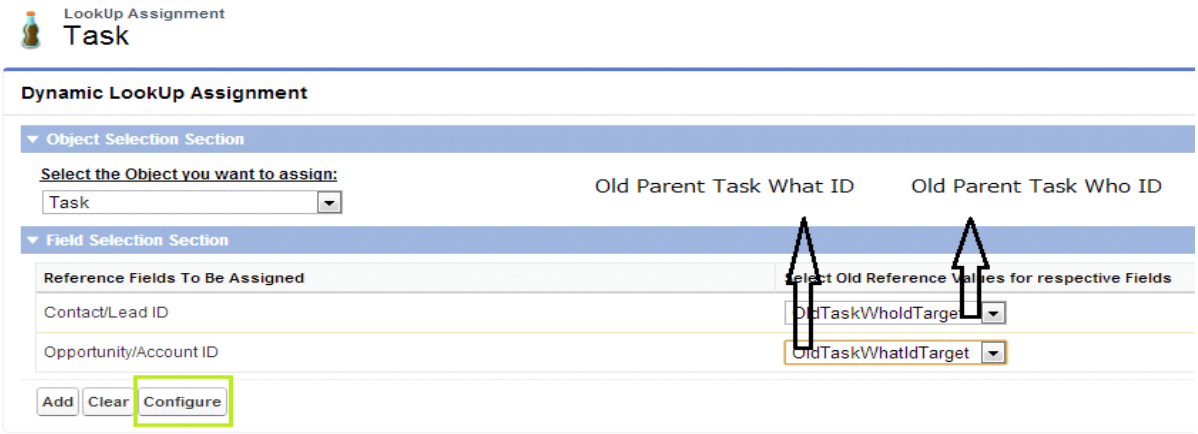


Dynamic Lookup Assignment for Task/Event

We know that Task/Event has two fields called WHOID(Contact/Lead ID) and WHATID(Opportunity/Account ID) which are called Polymorphic fields means those fields have relationship with multiple objects.

For this we cannot proceed like the above selection of OldRecordID because for WHOID/WHATID field we have to select old record ID for multiple objects (polymorphic field).

So there is a configure button for Task/Event where we can select old record ID for all the respective referenced objects in those fields. The parent field selection will be same as above just the Old record ID selection will be done in the Pop Up by clicking the Configure Button.



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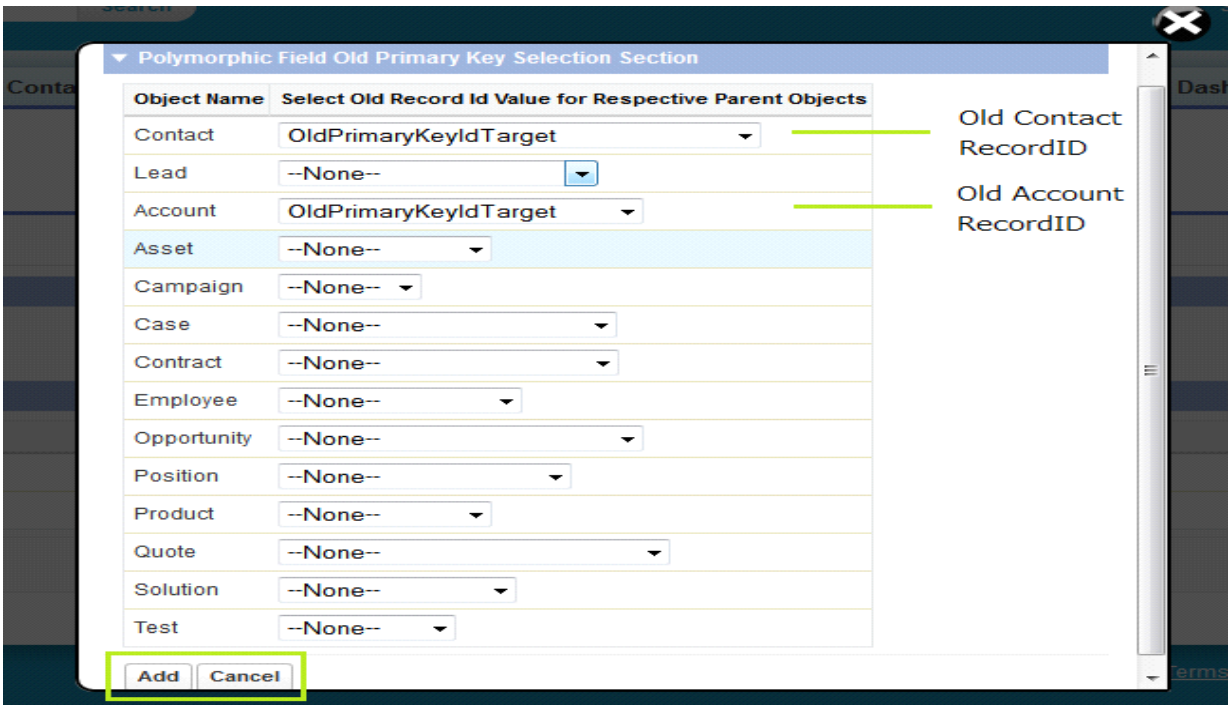
After clicking Configure, the Popup will open to select the Old Record ID of the parent objects and after selection click the Add/Cancel button.



Here in the above image Old record id for Contact and Account are selected and rest are not selected. This means the task records whose WHOID field contains contact reference and WHATID field contains account reference will only be executed and lookup will be assigned and the rest will be ignored as user didn't selected those. This provides the flexibility to the user to execute for only the required objects which can save good amount of time.

#Note: This is a batch apex that will run for both the data transfer and lookup assignment. Based on the volume of data it can take some time. Users can check whether the batch is Processed/Queued/Completed/Failures in the following path in the salesforce.com.

YourName > SetUp > Administration SetUp > Monitoring > Apex Jobs

OR

YourName > SetUp > Monitor > Jobs > Apex Jobs

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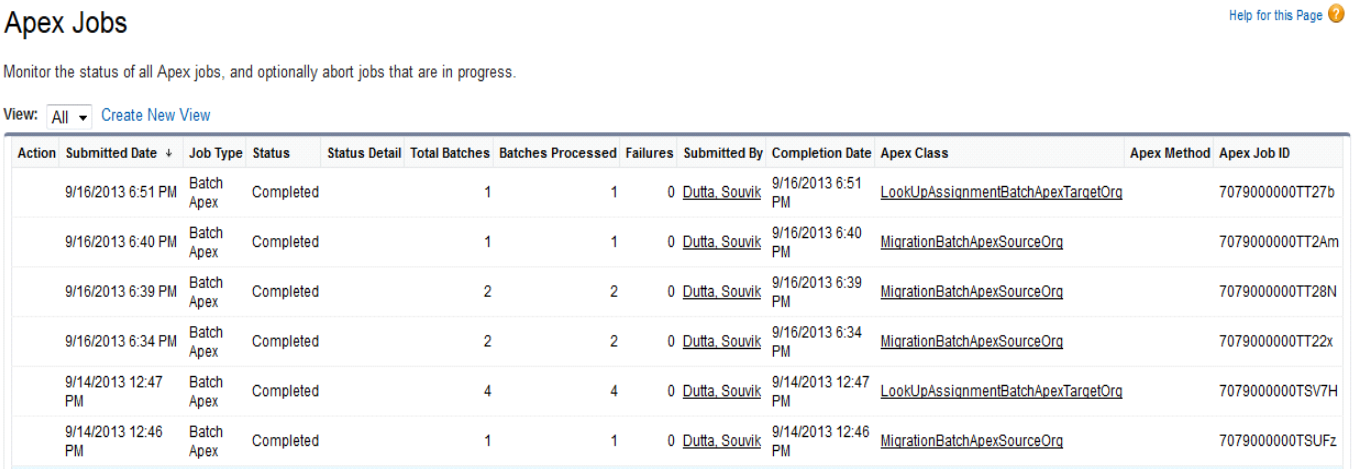

Apex Jobs

Help for this Page

Monitor the status of all Apex jobs, and optionally abort jobs that are in progress.

View: All Create New View

Action	Submitted Date	Job Type	Status	Status Detail	Total Batches	Batches Processed	Failures	Submitted By	Completion Date	Apex Class	Apex Method	Apex Job ID
	9/16/2013 6:51 PM	Batch Apex	Completed		1	1	0	Dutta, Souvik	9/16/2013 6:51 PM	LookUpAssignmentBatchApexTargetOrg		7079000000TT27b
	9/16/2013 6:40 PM	Batch Apex	Completed		1	1	0	Dutta, Souvik	9/16/2013 6:40 PM	MigrationBatchApexSourceOrg		7079000000TT2Am
	9/16/2013 6:39 PM	Batch Apex	Completed		2	2	0	Dutta, Souvik	9/16/2013 6:39 PM	MigrationBatchApexSourceOrg		7079000000TT28N
	9/16/2013 6:34 PM	Batch Apex	Completed		2	2	0	Dutta, Souvik	9/16/2013 6:34 PM	MigrationBatchApexSourceOrg		7079000000TT22x
	9/14/2013 12:47 PM	Batch Apex	Completed		4	4	0	Dutta, Souvik	9/14/2013 12:47 PM	LookUpAssignmentBatchApexTargetOrg		7079000000TSV7H
	9/14/2013 12:46 PM	Batch Apex	Completed		1	1	0	Dutta, Souvik	9/14/2013 12:46 PM	MigrationBatchApexSourceOrg		7079000000TSUFz

In the above path users can check whether the assignment is completed and if there occurs any failure or not.

Advantages and Disadvantages of Salesforce-S2S Extension:

Advantages:

a) It helps to transfer data very quickly around 1000 data/3-4 seconds but still the connection creation time at the time of transfer varies depending on the Salesforce server.

b) The data which is shared between two organizations are automatically updated in the target organization if there is some modification in the source organization.

Disadvantages:

a) We know that we can set the value of audit fields of most of the standard objects and all custom objects only during first insert by enabling the feature from Salesforce.com support. But S2S feature doesn't expose the audit fields even after enabling it. This is a big fault in S2S.

b) We cannot migrate data of all standard objects through S2S connection. There are some specific standard objects whose data we can transfer.

c) S2S connection cannot be created between Production and Sandbox organization or between Developer and Sandbox organization.

Things to Remember:

1) Please make sure that the object and its child objects which are migrating from one org to another has no active validation rules and triggers in the target organization. It may affect the process because validation rules and triggers restrict data entry for some special restrictions. So make sure that you de-activate all the rules and triggers and after migration and lookup assignment activate them again.

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2) Please make sure while migrating child objects along with parent, that a particular parent mustn't have more than 100 child objects. It will also hit the Salesforce governor limit. In case it happens then first 100 child objects will be considered.

3) Case -> CaseComment. CaseComment is a child object of Case. But you will not find this object in the child section when user selects Case. This is because S2S automatically handles the transfer of CaseComment at the time of transfer of Case records without user request. Before transferring Case just make sure the CaseComment object is published and subscribed and all the CaseComments are published i.e. public.

4) While transferring child objects, please note that only the values with parents will be transferred. For e.g Accounts with related contacts will only be transferred during child transfer. Contacts with no Accounts will not be migrated during child transfer. For that users have to select Contact Object in the object selection and send contact from there.

5) Please make sure that before executing Dynamic Look Assignment that all the necessary records are migrated in the target organization. For e.g. user is expecting look assignment for contact, but the necessary account records are not yet migrated in target, then assignment will not be done.

6) It is advisable not to send those objects having more than one reference fields through child sections. Instead transfer those objects individually and then assign lookups in the target organization from the Dynamic LookUp Assignment Section. For e.g. Case has look up with Account, Contact etc. So consider a situation where a case record is related to both account and contact. Then while transferring that case from the child section of account it will be migrated. Then as that case record is already migrated then it will not be related to contact even if it will be send from child section of contact. For that we have to assign lookup again from the lookup assignment section. So it is better to transfer those objects individually and then assign lookups in the target organization.

Conclusion:

Users can get dual functionality in this app. Users can transfer unlimited number of records from one Salesforce organization to another through our custom page and also in our dynamic lookup assignment page users can get it done most efficiently just by selecting the object names for which users want to assign lookups and selecting the old lookup values for each reference fields you want to assign.

Mindfire Solutions has deep experience in Customizing, developing and migrating Salesforce application. We will be glad to share our expertise in detail with you. To learn about our Salesforce expertise and services please visit here. Please provide your feedback to info@mindfiresolutions.com or call 1-248-686-1424.

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